

SEQUENCE LISTING

<110> Moon, Chulso
Mao, Li

<120> Dap-Kinase and Hoxa9, Two Human Genes Associated With Genesis,
Progression, and Aggressiveness of Non-Small Cell Lung Cancer

<130> 10620-1U1

<140> Not Yet Assigned

<141> 2001-11-29

<150> US 60/250,083

<151> 2000-11-29

<160> 7

<170> PatentIn version 3.0

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tgtattgttt	tctgacagtt	tttctgtttt	gtttggcaag	gaaaggggag	aagggaatcc								5352
tcctccaggg	tgattttatg	atcagtgttg	ttgctctagg	aagacatttt	tccgtttgct								5412
tttgttccaa	tgtcaatgtg	aacgtccaca	tgaaacctac	acactgtcat	gcttcatcat								5472
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attcagaaga	cccctgactc	atcattttgtg	gcagtccttt	ataattgggtg	catagcagat								5592
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245 250 255

Val Lys Asp Pro Lys Lys Arg Met Thr Ile Gln Asp Ser Leu Gln His
260 265 270

Pro Trp Ile Lys Pro Lys Asp Thr Gln Gln Ala Leu Ser Arg Lys Ala
275 280 285

Ser Ala Val Asn Met Glu Lys Phe Lys Lys Phe Ala Ala Arg Lys Lys
290 295 300

Trp Lys Gln Ser Val Arg Leu Ile Ser Leu Cys Gln Arg Leu Ser Arg
305 310 315 320

Ser Phe Leu Ser Arg Ser Asn Met Ser Val Ala Arg Ser Asp Asp Thr
325 330 335

Leu Asp Glu Glu Asp Ser Phe Val Met Lys Ala Ile Ile His Ala Ile
340 345 350

Asn Asp Asp Asn Val Pro Gly Leu Gln His Leu Leu Gly Ser Leu Ser
355 360 365

Asn Tyr Asp Val Asn Gln Pro Asn Lys His Gly Thr Pro Pro Leu Leu
370 375 380

Ile Ala Ala Gly Cys Gly Asn Ile Gln Ile Leu Gln Leu Leu Ile Lys
385 390 395 400

Arg Gly Ser Arg Ile Asp Val Gln Asp Lys Gly Gly Ser Asn Ala Val
405 410 415

Tyr Trp Ala Ala Arg His Gly His Val Asp Thr Leu Lys Phe Leu Ser
420 425 430

Glu Asn Lys Cys Pro Leu Asp Val Lys Asp Lys Ser Gly Glu Met Ala
435 440 445

Leu His Val Ala Ala Arg Tyr Gly His Ala Asp Val Ala Gln Val Thr
450 455 460

690

695

700

Val Glu Ser Leu Lys Cys Gly Leu Leu Arg Ser Phe Phe Arg Arg Arg
705 710 715 720

Arg Pro Arg Leu Ser Ser Thr Asn Ser Ser Arg Phe Pro Pro Ser Pro
725 730 735

Leu Ala Ser Lys Pro Thr Val Ser Val Ser Ile Asn Asn Leu Tyr Pro
740 745 750

Gly Cys Glu Asn Val Ser Val Arg Ser Arg Ser Met Met Phe Glu Pro
755 760 765

Gly Leu Thr Lys Gly Met Leu Glu Val Phe Val Ala Pro Thr His His
770 775 780

Pro His Cys Ser Ala Asp Asp Gln Ser Thr Lys Ala Ile Asp Ile Gln
785 790 795 800

Asn Ala Tyr Leu Asn Gly Val Gly Asp Phe Ser Val Trp Glu Phe Ser
805 810 815

Gly Asn Pro Val Tyr Phe Cys Cys Tyr Asp Tyr Phe Ala Ala Asn Asp
820 825 830

Pro Thr Ser Ile His Val Val Val Phe Ser Leu Glu Glu Pro Tyr Glu
835 840 845

Ile Gln Leu Asn Pro Val Ile Phe Trp Leu Ser Phe Leu Lys Ser Leu
850 855 860

Val Pro Val Glu Glu Pro Ile Ala Phe Gly Gly Lys Leu Lys Asn Pro
865 870 875 880

Leu Gln Val Val Leu Val Ala Thr His Ala Asp Ile Met Asn Val Pro
885 890 895

Arg Pro Ala Gly Gly Glu Phe Gly Tyr Asp Lys Asp Thr Ser Leu Leu
900 905 910

Lys Glu Ile Arg Asn Arg Phe Gly Asn Asp Leu His Ile Ser Asn Lys
915 920 925

Leu Phe Val Leu Asp Ala Gly Ala Ser Gly Ser Lys Asp Met Lys Val
 930 935 940

Leu Arg Asn His Leu Gln Glu Ile Arg Ser Gln Ile Val Ser Val Cys
 945 950 955 960

Pro Pro Met Thr His Leu Cys Glu Lys Ile Ile Ser Thr Leu Pro Ser
 965 970 975

Trp Arg Lys Leu Asn Gly Pro Asn Gln Leu Met Ser Leu Gln Gln Phe
 980 985 990

Val Tyr Asp Val Gln Asp Gln Leu Asn Pro Leu Ala Ser Glu Glu Asp
 995 1000 1005

Leu Arg Arg Ile Ala Gln Gln Leu His Ser Thr Gly Glu Ile Asn
 1010 1015 1020

Ile Met Gln Ser Glu Thr Val Gln Asp Val Leu Leu Leu Asp Pro
 1025 1030 1035

Arg Trp Leu Cys Thr Asn Val Leu Gly Lys Leu Leu Ser Val Glu
 1040 1045 1050

Thr Pro Arg Ala Leu His His Tyr Arg Gly Arg Tyr Thr Val Glu
 1055 1060 1065

Asp Ile Gln Arg Leu Val Pro Asp Ser Asp Val Glu Glu Leu Leu
 1070 1075 1080

Gln Ile Leu Asp Ala Met Asp Ile Cys Ala Arg Asp Leu Ser Ser
 1085 1090 1095

Gly Thr Met Val Asp Val Pro Ala Leu Ile Lys Thr Asp Asn Leu
 1100 1105 1110

His Arg Ser Trp Ala Asp Glu Glu Asp Glu Val Met Val Tyr Gly
 1115 1120 1125

Gly Val Arg Ile Val Pro Val Glu His Leu Thr Pro Phe Pro Cys
 1130 1135 1140

Gly	Ile	Phe	His	Lys	Val	Gln	Val	Asn	Leu	Cys	Arg	Trp	Ile	His
1145						1150					1155			
Gln	Gln	Ser	Thr	Glu	Gly	Asp	Ala	Asp	Ile	Arg	Leu	Trp	Val	Asn
1160						1165					1170			
Gly	Cys	Lys	Leu	Ala	Asn	Arg	Gly	Ala	Glu	Leu	Leu	Val	Leu	Leu
1175						1180					1185			
Val	Asn	His	Gly	Gln	Gly	Ile	Glu	Val	Gln	Val	Arg	Gly	Leu	Glu
1190						1195					1200			
Thr	Glu	Lys	Ile	Lys	Cys	Cys	Leu	Leu	Leu	Asp	Ser	Val	Cys	Ser
1205						1210					1215			
Thr	Ile	Glu	Asn	Val	Met	Ala	Thr	Thr	Leu	Pro	Gly	Leu	Leu	Thr
1220						1225					1230			
Val	Lys	His	Tyr	Leu	Ser	Pro	Gln	Gln	Leu	Arg	Glu	His	His	Glu
1235						1240					1245			
Pro	Val	Met	Ile	Tyr	Gln	Pro	Arg	Asp	Phe	Phe	Arg	Ala	Gln	Thr
1250						1255					1260			
Leu	Lys	Glu	Thr	Ser	Leu	Thr	Asn	Thr	Met	Gly	Gly	Tyr	Lys	Glu
1265						1270					1275			
Ser	Phe	Ser	Ser	Ile	Met	Cys	Phe	Gly	Cys	His	Asp	Val	Tyr	Ser
1280						1285					1290			
Gln	Ala	Ser	Leu	Gly	Met	Asp	Ile	His	Ala	Ser	Asp	Leu	Asn	Leu
1295						1300					1305			
Leu	Thr	Arg	Arg	Lys	Leu	Ser	Arg	Leu	Leu	Asp	Pro	Pro	Asp	Pro
1310						1315					1320			
Leu	Gly	Lys	Asp	Trp	Cys	Leu	Leu	Ala	Met	Asn	Leu	Gly	Leu	Pro
1325						1330					1335			
Asp	Leu	Val	Ala	Lys	Tyr	Asn	Thr	Asn	Asn	Gly	Ala	Pro	Lys	Asp
1340						1345					1350			

Phe Leu Pro Ser Pro Leu His Ala Leu Leu Arg Glu Trp Thr Thr
1355 1360 1365

Tyr Pro Glu Ser Thr Val Gly Thr Leu Met Ser Lys Leu Arg Glu
1370 1375 1380

Leu Gly Arg Arg Asp Ala Ala Asp Leu Leu Leu Lys Ala Ser Ser
1385 1390 1395

Val Phe Lys Ile Asn Leu Asp Gly Asn Gly Gln Glu Ala Tyr Ala
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Ser Ser Cys Asn Ser Gly Thr Ser Tyr Asn Ser Ile Ser Ser Val
1415 1420 1425

Val Ser Arg
1430

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cgg cgg cgg gcg agg cac gct tcg cgg gca gca cca gaa ctg gtc ggt 96
Arg Arg Arg Ala Arg His Ala Ser Arg Ala Ala Pro Glu Leu Val Gly
20 25 30

gat tta ggt agt ttc ctg ttg ttg gga tcc acc ttt ctc tcg aca ggc 144
Asp Leu Gly Ser Phe Leu Leu Leu Gly Ser Thr Phe Leu Ser Thr Gly
35 40 45

acg aca ctg ccc ttc att act tca gtt gaa atc gtc tcc agg tac ctc 192
Thr Thr Leu Pro Phe Ile Thr Ser Val Glu Ile Val Ser Arg Tyr Leu
50 55 60

tgc gcg cgg ggg tcg ggc cgc gcg ggg cat cac ggc cct ggt cgt gcc 240
Cys Ala Arg Gly Ser Gly Arg Ala Gly His His Gly Pro Gly Arg Ala
65 70 75 80

agg cct gcg gtg gca acc tcg gct ttc cct gct cag gag cct cgt gtc 288
Arg Pro Ala Val Ala Thr Ser Ala Phe Pro Ala Gln Glu Pro Arg Val
85 90 95

ttt ctc cgc agc gct ttg cca gcc ggc cgg ctt tcc cct tcc acc aca 336
 Phe Leu Arg Ser Ala Leu Pro Ala Gly Arg Leu Ser Pro Ser Thr Thr
 100 105 110

cac ctc cac ctg gtc aca gca gat aac cca gca gcc aac tgg ctt cat 384
 His Leu His Leu Val Thr Ala Asp Asn Pro Ala Ala Asn Trp Leu His
 115 120 125

gcg cgc tcc act cgg aaa aag cgg tgc ccc tat aca aaa cac cag acc 432
 Ala Arg Ser Thr Arg Lys Lys Arg Cys Pro Tyr Thr Lys His Gln Thr
 130 135 140

ctg gaa ctg gag aaa gag ttt ctg ttc aac atg tac ctc acc agg gac 480
 Leu Glu Leu Glu Lys Glu Phe Leu Phe Asn Met Tyr Leu Thr Arg Asp
 145 150 155 160

cgc agg tac gag gtg gct cga ctg ctc aac ctc acc gag agg cag gtc 528
 Arg Arg Tyr Glu Val Ala Arg Leu Leu Asn Leu Thr Glu Arg Gln Val
 165 170 175

aag atc tgg ttc cag aac cgc agg atg aaa atg aag aaa atc aac aaa 576
 Lys Ile Trp Phe Gln Asn Arg Arg Met Lys Met Lys Lys Ile Asn Lys
 180 185 190

gac cga gca aaa gac gag tga 597
 Asp Arg Ala Lys Asp Glu
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Asp Leu Gly Ser Phe Leu Leu Leu Gly Ser Thr Phe Leu Ser Thr Gly
 35 40 45

Thr Thr Leu Pro Phe Ile Thr Ser Val Glu Ile Val Ser Arg Tyr Leu
 50 55 60

Cys Ala Arg Gly Ser Gly Arg Ala Gly His His Gly Pro Gly Arg Ala
 65 70 75 80

Arg Pro Ala Val Ala Thr Ser Ala Phe Pro Ala Gln Glu Pro Arg Val
85 90 95

Phe Leu Arg Ser Ala Leu Pro Ala Gly Arg Leu Ser Pro Ser Thr Thr
100 105 110

His Leu His Leu Val Thr Ala Asp Asn Pro Ala Ala Asn Trp Leu His
115 120 125

Ala Arg Ser Thr Arg Lys Lys Arg Cys Pro Tyr Thr Lys His Gln Thr
130 135 140

Leu Glu Leu Glu Lys Glu Phe Leu Phe Asn Met Tyr Leu Thr Arg Asp
145 150 155 160

Arg Arg Tyr Glu Val Ala Arg Leu Leu Asn Leu Thr Glu Arg Gln Val
165 170 175

Lys Ile Trp Phe Gln Asn Arg Arg Met Lys Met Lys Lys Ile Asn Lys
180 185 190

Asp Arg Ala Lys Asp Glu
195